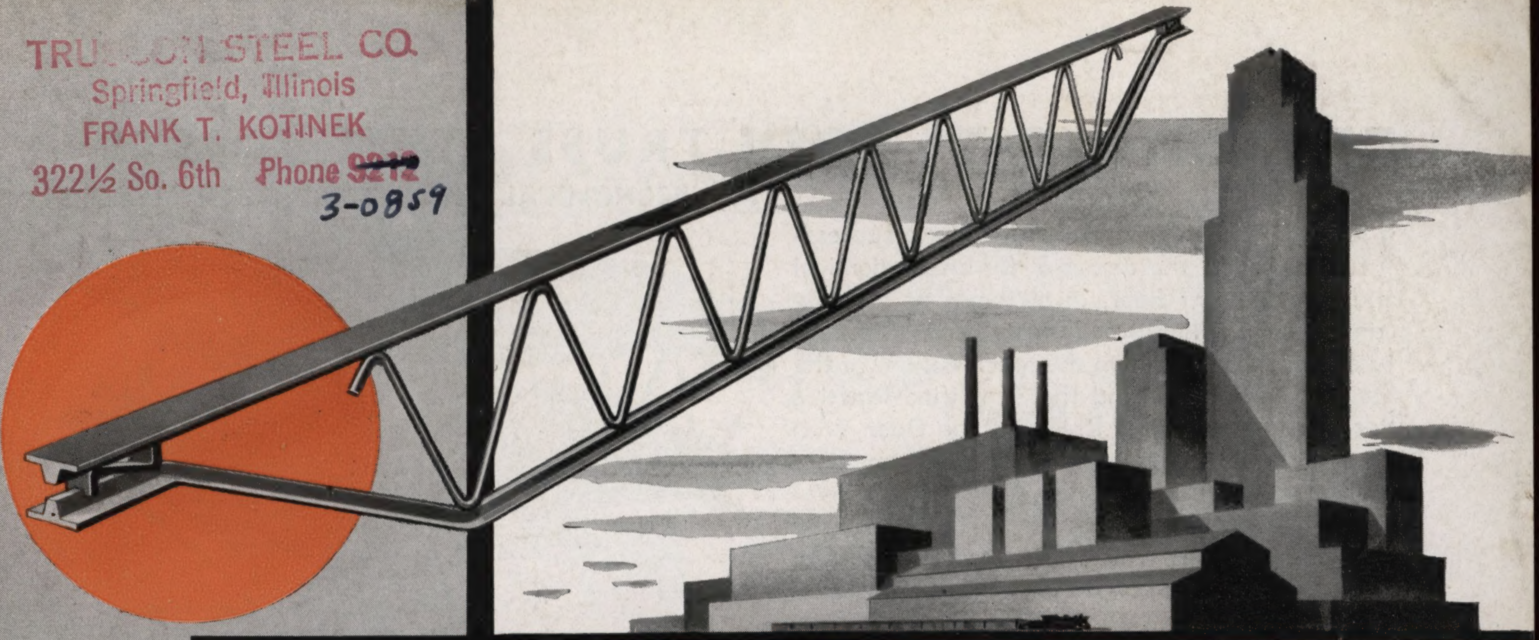
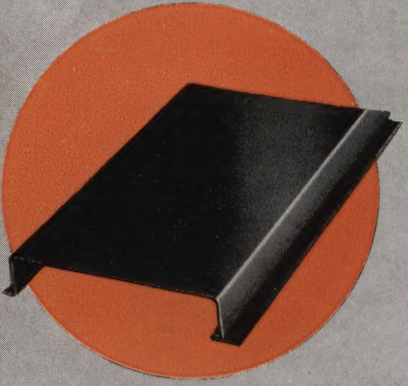
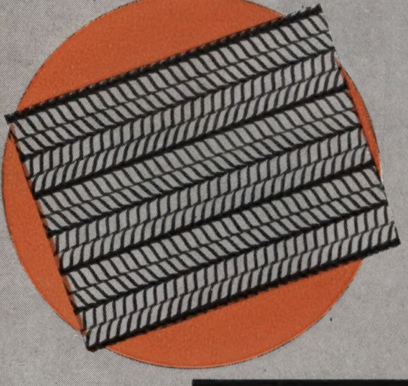
TRUSCON STEEL CO.
Springfield, Illinois
FRANK T. KOTINEK
322½ So. 6th Phone ~~9212~~ 3-0859







TRUSCON

STEEL JOISTS
STEELDECK ROOF
METAL LATH

CONCRETE BARS AND REINFORCING

BUILDING MATERIALS
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GOOD COAL
VALUE
BETTER
Your CHAMPAIGN ILL URBANA Dealer
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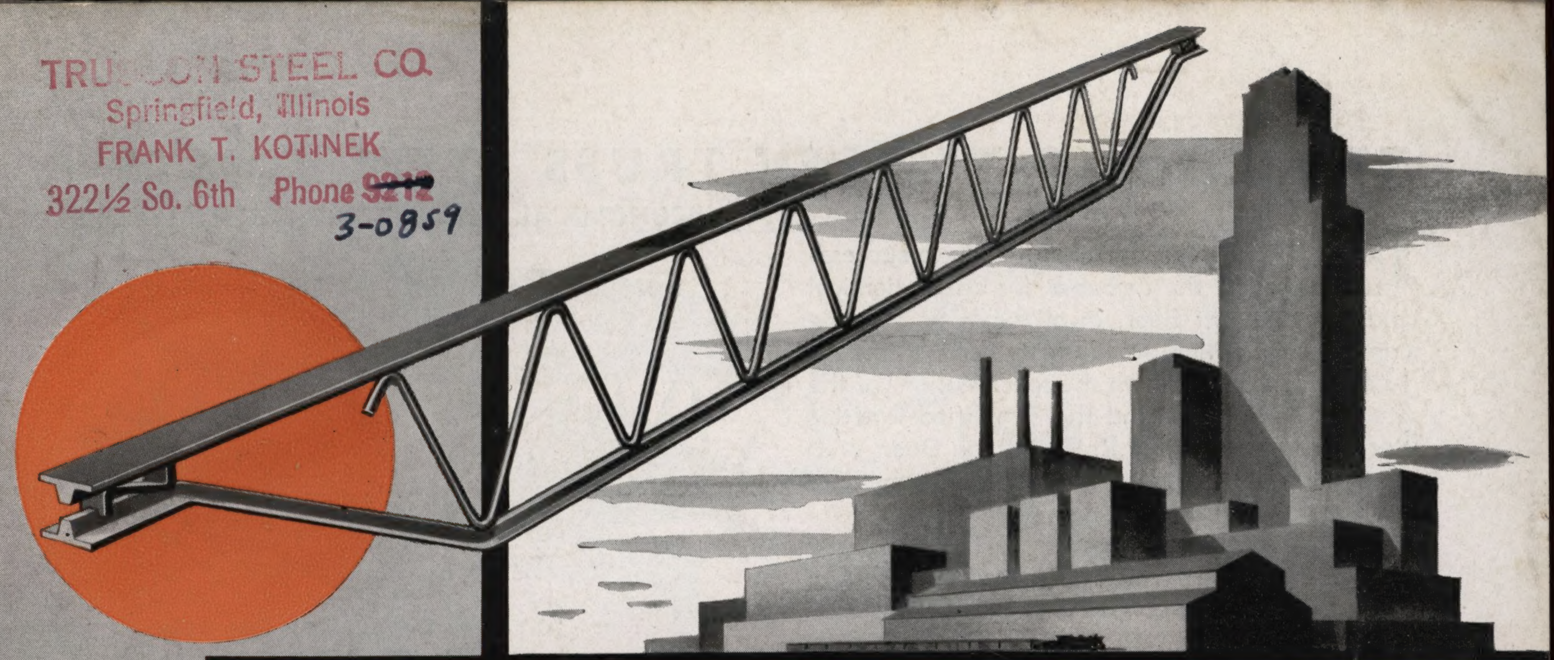

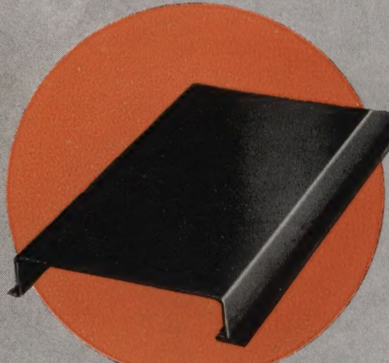

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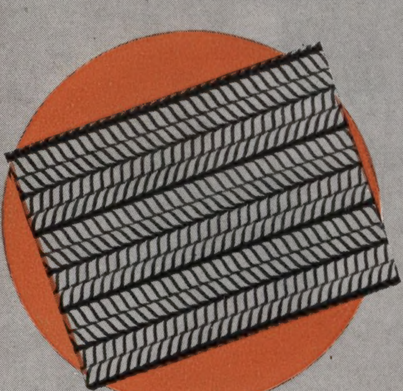

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TRUSCON "O-T" OPEN TRUSS STEEL JOISTS

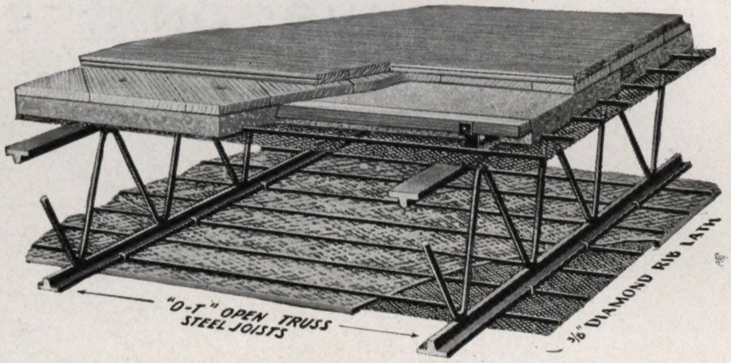
FOR ECONOMICAL AND FIRE RESISTANT FLOORS

TRUSCON Open Truss Steel Joists are successfully meeting the demands for an economical and fire resistant floor, in all types of building construction. They are designed and manufactured in accordance with the specifications of the Steel Joist Institute and the Simplified Practice Recommendations (S.P.R. 94-30) on Open Web Steel Joists as issued by the U.S. Department of Commerce, Bureau of Standards.

Fundamentally, the Truscon "O-T" Open Truss Joist is a Warren truss having top and bottom chords of wide tee-shaped members and a plain round continuous web member. The bottom chord is continuous from end to end of joist and bent up at the ends to form the bearings. Web members are continuous and of the same diameter from end to end. High pressure electric automatic welding is used to make positive connections at all joints.

The underslung design of the bearing permits maximum headroom under the supporting girders. The open web allows the passage of pipes and conduits.

In practical use Truscon "O-T" Open Truss Steel Joists are very simple to install, being completely shop fabricated and reaching the job ready for placing. Each joist is marked to correspond with the erection diagram, thus greatly simplifying and speeding construction work. Thorough tests under extreme loadings have demonstrated their all-around dependability.

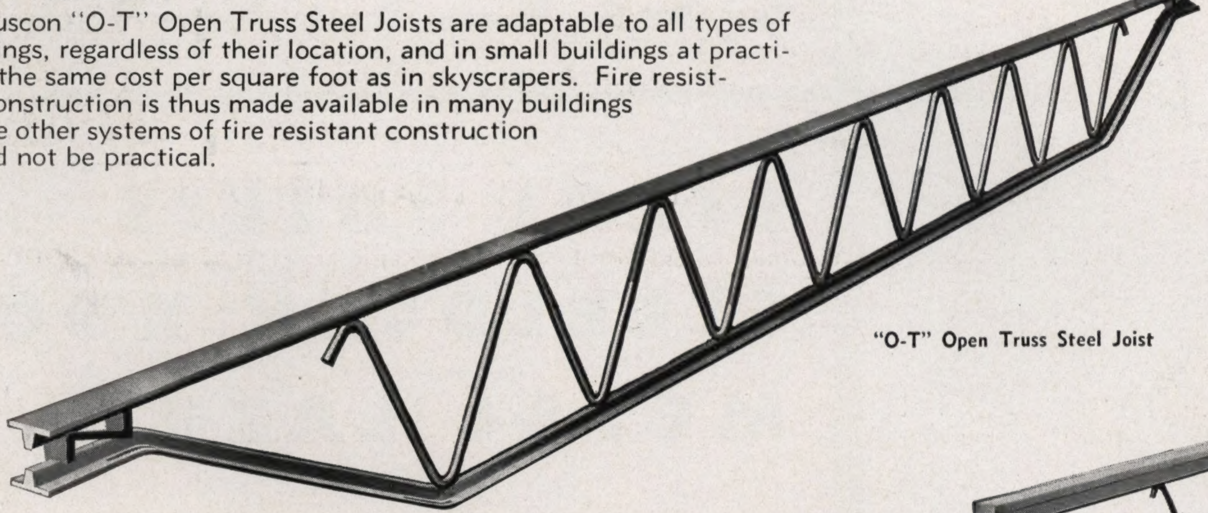


Truscon "O-T" Open Truss Steel Joist Construction

With concrete slab and wood sub and finished floors secured by means of Screeds placed at right angles to the Joists and elevated to provide for concrete underneath.

ADAPTABILITY

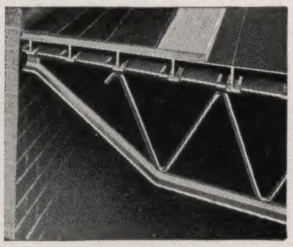
Truscon "O-T" Open Truss Steel Joists are adaptable to all types of buildings, regardless of their location, and in small buildings at practically the same cost per square foot as in skyscrapers. Fire resistant construction is thus made available in many buildings where other systems of fire resistant construction would not be practical.



"O-T" Open Truss Steel Joist

DETAILS OF CONSTRUCTION "O-T" JOISTS

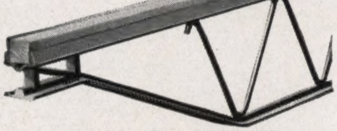
Roof Purlins



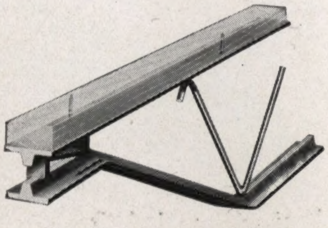
Roof Purlins

Open Truss Steel Joists have proved to be very economical and practical for use as roof purlins supporting steel deck roofs. The method of attaching the roof to the steel joists is very simple and positive, as shown in illustration.

Occasionally it is desired to attach a wood roof deck to Truscon "O-T" Open Truss Steel Joists used as roof purlins. Truscon Nailer Joists or standard "O-T" Open Truss Steel Joists with nailing screeds (1½ x $2\frac{11}{16}$ in.) attached in the shop by means of lag screws, can be provided to meet this requirement.



Nailer Joist



"O-T" Joist with Nailing Screed Attached

Phantom view showing lag screws.

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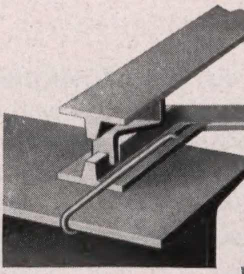
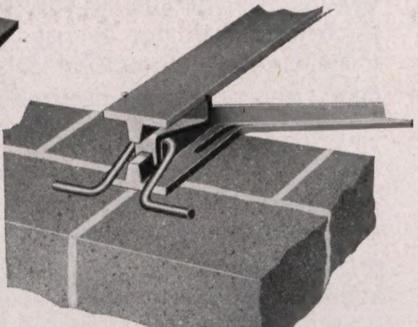
NOTE: See Catalog in Section 16a/19 for complete information on Truscon Steel Windows and Steel Doors.

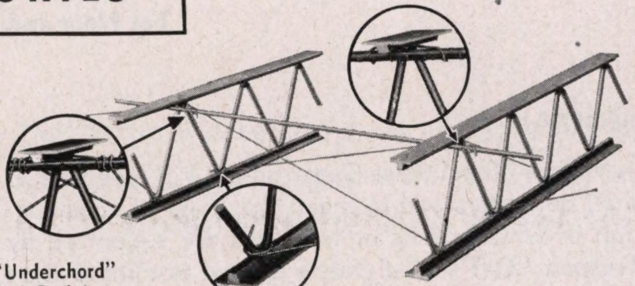
"O-T" STEEL JOIST ACCESSORIES



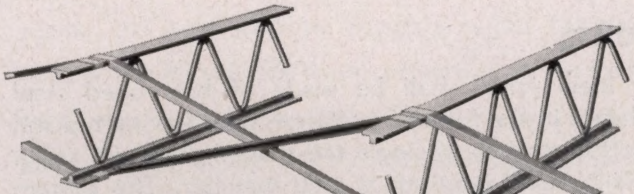
Beam Archor P-3099
Holds the joist in place on structural steel beam.



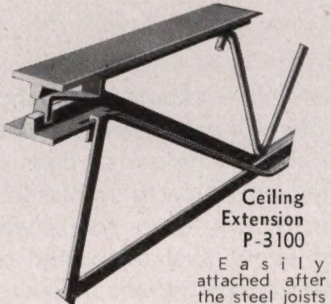
Wall Anchor P-3101
Affords additional bond between floor and wall construction when wall is of such a height or nature as to be not self-sustaining.



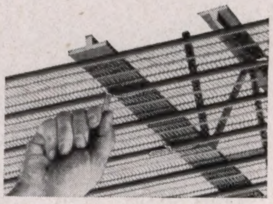
"Underchord" Rod Bridging
This type of bridging is very practical and will permit of a slight variation in joist spacings as is frequently necessary in order that joists can be spaced to avoid interference with bolt or rivet heads in supporting members, vent ducts, soil pipes, etc.



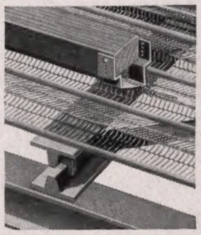
Strut Bridging
For rigid and economical bridging that can be easily installed, this type has proved very popular. It is made of ¾-in. box channels and cut to lengths to meet the exact spacing of the joists. This strut bridging holds the joists in a vertical plane, assuring accurate spacing and distribution of loads by acting in both tension and compression.



Ceiling Extension P-3100
Easily attached after the steel joists are in place.



Lath Clips
Made in different sizes to meet the different widths of chord flanges. When attaching the ceiling lath, the clips should straddle the ribs of the lath.



Screed Clip P-3106
Screed Clips are used when it is desired to hold the screeds at right angles to the joists and to elevate them so that concrete can be poured beneath them. Lath clips of proper size are used to hold the screed clips in place.

TRUSCON "O-T" STEEL JOIST LOADING TABLE

Table One

The following table gives the total safe uniformly distributed load carrying capacities in pounds per lineal foot of span.

NOMINAL DEPTHS		8″		10″			12″				14″			16″	
JOIST TYPES		81	82	102	103	104	123	124	125	126	145	146	147	166	167
ESTIMATED WEIGHT IN LBS. PER FOOT		3.42	4.00	4.00	4.68	5.65	5.00	5.65	6.80	8.00	6.92	8.00	9.55	8.30	9.60
MAXIMUM END REACTION IN LBS.		1600	1900	1900	1950	2220	2200	2300	2500	2700	2900	3100	3400	3200	3600
Clear opening or net span	8′-0″	308	475												
	9′-0″	243	422												
	10′-0″	197	350	380	390	440									
	11′-0″	162	289	346	355	400									
	12′-0″	137	243	292	325	367	367	384	417	450					
	13′-0″	116	207	248	300	338	338	354	384	415					
	14′-0″	100	178	214	278	314	313	328	357	386	414	443	486		
	15′-0″	87	155	187	243	293	272	307	333	360	387	413	454		
	16′-0″	77	137	164	213	260	240	287	312	337	363	387	425	400	450
	17′-0″			145	189	230	212	265	294	318	342	365	400	376	424
	18′-0″			129	169	205	189	236	278	300	321	344	378	356	400
	19′-0″			116	151	184	170	212	263	284	288	326	358	337	379
	20′-0″			105	137	167	153	192	237	270	260	310	340	320	360
	21′-0″						139	174	215	257	236	295	324	305	343
	22′-0″						127	158	196	241	215	282	309	291	327
	23′-0″						116	145	179	221	197	258	296	278	313
	24′-0″						105	133	164	202	180	237	283	267	300
	25′-0″										166	218	262	247	288
	26′-0″										154	202	243	229	277
	27′-0″										143	187	225	212	257
	28′-0″										133	174	209	197	239
	29′-0″													184	223
	30′-0″													172	208
	31′-0″													161	195
	32′-0″													151	183

For floor construction joists should not be spaced over 24 inches, o.c.

TRUSCON "O-T" OPEN TRUSS STEEL JOIST SPECIFICATIONS

For Floor and Roof Construction

GENERAL

Where "Steel Joist Construction" is specified, it shall be understood to mean that type of construction in which decks or top slabs are supported by Truscon "O-T" Steel Joists spaced not more than 24 in. on centers in floors or 30 in. on centers in roofs.

JOISTS

Steel joists shall be made of hot rolled steel shapes in the form of a Warren truss having top and bottom chords of single tee-shaped members and a plain round continuous web member. The bottom chord shall be continuous from end to end of joist and bent up at the ends to form the bearings. Steel joists shall be fabricated by means of electric machine welding under pressure making positive connections at all joints.

All steel used shall conform to the American Society for Testing Materials Standard Specifications for Steel for Bridges and Builders Designation A-7 of latest adoption.

All steel joists shall be spray painted with one shop coat of asphalt base metal protective paint.

> *Note:—Years of study have convinced us that a shop coat of black asphalt base paint provides the most practical protective coating for Open-Truss Steel Joists. It must be remembered, however, that if joists are to be exposed in a building, without a protective ceiling attached, this paint will bleed through any second coat of paint that might be applied.*

DESIGN

The design and details of all joists shall meet the requirements of the Steel Joist Institute Specifications.

LOCATION AND SPACING OF JOISTS

Steel joists shall be spaced not more than 24 inches on centers in floors or 30 inches on centers in roofs, except they may be used to support roof-decks, if not spaced over seven feet on centers and provided the deck is securely attached to the top chords to prevent any lateral deflection.

There shall be one typical joist spaced not more than four inches in the clear from each end wall or bearing wall parallel to the joists. Structural steel tie beams shall not be used to take the place of joists unless architectural or structural plans indicate same are to be used as supporting members.

Where a partition is parallel to joists and the length of the partition exceeds fifty per cent of the joist span, one extra joist shall be provided under the partition or, if necessary, double joists shall be provided under the partition to safely support the additional partition load. Where partitions extend over joists at right angles to same, the additional partition load must be included in computations as part of the dead load.

ANCHORAGE

The ends of steel joists shall extend a distance of at least four in. on concrete or masonry, and at least 2½ in. on structural steel supports. Ends of every third joist supported on concrete or masonry shall be anchored thereto with a ⅜-in. round wall anchor and each end of every joist supported on structural steel shall be anchored thereto by means of a $\frac{3}{16}$-in. round beam anchor or two welds each one inch long.

Steel joists parallel to walls shall have the top and bottom chords anchored to the wall where each row of bridging occurs.

SPAN

The span of steel joists shall not exceed 24 times the depth of the steel portion of the steel joist.

BRIDGING

As soon as steel joists have been erected, bridging of an approved Steel Joist Institute type shall be installed between them before the application of construction loads. Bridging rows shall be spaced as follows:

Clear spans 0 to 14 feet—One bridging row

Clear spans 14 to 21 feet—Two bridging rows

Clear spans 21 to 32 feet—Three bridging rows

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TRUSCON "O-T" OPEN TRUSS STEEL JOIST SPECIFICATIONS

(Continued)

CEILINGS

Where fire resistive construction is required, steel joists shall be protected on the underside with a fire resistive ceiling consisting of plaster on metal lath and shall have a reinforced concrete or gypsum top slab, all as is necessary to provide the required degree of fire resistance, provided that where wood joist construction is permitted steel joists may have a wood nailing strip attached to the top chord and a wood floor may be used, and provided further that where steel joists are used in places where unprotected wood joists are permitted no ceiling protection need be provided.

Where directly attached ceilings occur, ceiling extensions shall be provided at the ends of the steel joists.

Metal ceiling lath for directly attached ceilings shall be ⅜-in. rib lath weighing 3.4 lbs. per square yard for joist spacings up to 30 inches. The rib lath shall be placed under the joists with the ribs up and at right angles to the joists. Ceiling lath shall be attached to the bottoms of the joists by means of lath clips spaced 8 inches apart, placed over the ribs of the lath.

DECKS OR TOP SLABS

A concrete top slab 2 in. thick shall be used for floor and roof construction. The concrete top slab shall be reinforced and supported by ⅜-in. rib lath weighing 4.0 lb. per square yard for joist spacings up to 24 in. and ¾-in. rib lath weighing .60 lbs. per square foot for joist spacings from 24 in. to 30 in. The rib lath shall be placed over the joists with the ribs up and at right angles to the joists. Top lath shall be attached to the top of the joists by means of lath clips spaced 8 in. apart. The ends of all lath sheets shall be lapped at least 2 in. when the laps occur directly over joists and 4 in. when between joists. All laps shall be securely wired together. Where the floor finish is other than wood, the structural slab shall be reinforced against temperature stresses with 6 x 6 10/10 welded wire reinforcement placed near the top of the slab.

Precast concrete top slabs, precast gypsum top slabs, wood decks, or steel decks may be used over steel joists provided they are securely attached to the top chords to prevent any lateral deflection.

> *Note:—It is obviously impossible for Truscon to be responsible for differences in level between the tops of adjacent joists, whether due to slight inaccuracies which may occur in manufacturing or to the methods employed in installing the joists. Provision must be made by others, when necessary, to insure a uniform and level bearing for precast slabs placed over steel joists. This may be done by placing shims or some type of plastic material over the top flange of each joist where required.*

WOOD FLOORS

Where wood floors are required over concrete top slab, screed clips shall be attached to the top chord of the joists to receive 2-in. by 3-in. (1⅝-in. by 2⅝-in. actual size) wood screeds. The screed clips shall raise the bottom of the wood screeds 1 in. above the joists.

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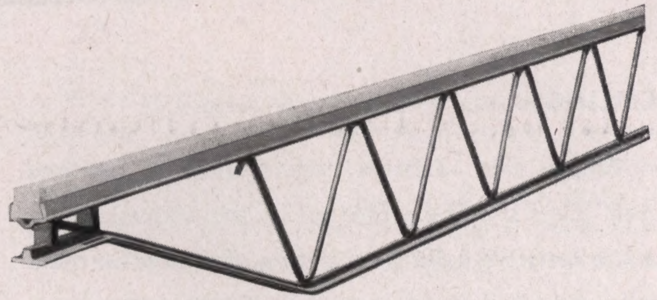
TRUSCON "O-T" OPEN TRUSS NAILER JOISTS

Manufacture of this Nailer Joist is delayed due to difficulties in securing proper nailing strip.



TRUSCON Open Truss Nailer Joists provide all the advantages of permanent floor construction for homes, apartments and other light occupancy buildings at a cost comparable with ordinary floors.

In them are incorporated the basic features of Truscon "O-T" Open Truss Steel Joists, so extensively used in important buildings throughout the country. Unusual strength and rigidity result from their superior design and construction. Easy installation follows a complete and accurate fabrication in the Truscon plant.

Wide, specially formed members for top and bottom chords impart stiffness to the Nailer Joists and keep them true to line. The continuous steel web member of uniform diameter throughout its entire length, is securely welded to the chords by means of high pressure electric automatic welding.

The end construction—a vital point in steel joist design—is unusually strong and rigid. Bearings for the joists are wide and ample. The underslung design of the supports not only insures stability of the joists during installation but provides additional head room under the supporting girders.

ADVANTAGES OF NAILER JOISTS

Truscon "O-T" Open Truss Nailer Joists reach the job ready for placing without cutting or fitting. The wood flooring is nailed directly to the wood nailing strips which are securely attached to the top chords of the joists.

The light weight of nailer joist construction lessens the time and labor required for erection and also saves materials in the supporting framework and foundations. Every detail of joists and attachments has been perfected by practical experience to simplify installation and assure dependable results.

With a metal lath plastered ceiling attached to the lower chord of the joists, the construction provides fire-safety to a substantial degree, preventing the spread of fire from below.

With Truscon "O-T" Open Truss Nailer Joists available it is no longer necessary, from either a practical or economical standpoint, to use wood joist construction in any building.

Loading Table Two

The following table gives the total safe uniformly-distributed load-carrying capacities in pounds per lineal foot of span.

Nominal Depth of Steel Portion only		8″	10″	12″		14″	16″
Joist Types		80W	100W	120W	121W	141W	161W
Estimated Weight in lbs. per foot		4.25	4.25	4.25	6.60	6.60	6.60
Maximum End Reaction in lbs.		1550	1900	2000	2300	2300	3100
Clear opening or net span	8′-0″	388					
	9′-0″	344					
	10′-0″	310					
	11′-0″	256					
	12′-0″	215	259	333			
	13′-0″	183	221	288			
	14′-0″	158	190	248	329		
	15′-0″	138	166	216	307		
	16′-0″	121	146	190	288		
	17′-0″		129	168	271	271	
	18′-0″		115	150	247	296	305
	19′-0″		103	135	222	242	273
	20′-0″		93	122	200	228	247
	21′-0″			110	181	207	224
	22′-0″			101	165	189	204
	23′-0″			92	151	173	187
	24′-0″			85	139	159	171
	25′-0″					146	158
	26′-0″					135	146
	27′-0″					125	135
	28′-0″					117	126
	29′-0″						117
	30′-0″						110
	31′-0″						103
	32′-0″						96

For floor construction nailer joists should not be spaced over 18 inches o.c.

SPECIFICATIONS

General—Where Nailer Joist floor construction is specified, it is understood to mean Truscon "O-T" Open Truss Nailer Joists of the size and spacing as shown on the drawings, together with a wooden floor over the joists and, unless otherwise specified, a metal lath and plaster ceiling directly beneath the joists.

The Nailer Joists shall be made of rolled steel shapes fabricated by high pressure electric automatic welding. The web member shall be a continuous plain round bar of constant diameter bent cold. The top chord shall be straight and the bottom chord bent up to form the bearing. The design and details of all members shall meet the requirements of the Steel Joist Institute Specifications. The wood nailer strip shall not be considered in determining the carrying capacity of the joist.

Nailer Strip—The wood nailer strip shall be treated with a moisture-proofing solution to prevent its absorption of moisture. It shall be held securely on top of the top chord by pressure embedment of the flanges of the top chord into its sides.

Painting — All Nailer Joists shall be spray or dip painted with one shop coat of good black asphalt metal protective paint.

Bearing and Anchorage—The ends of joists shall extend a distance of at least four (4″) in. on masonry or reinforced concrete supports and at least two and one-half (2½″) in. on steel supports. Every third joist bearing on masonry walls shall be anchored. Joists parallel to walls shall have the bottom chords anchored at the line of the rows of bridging. Every joist bearing on structural steel beams shall be fastened by an anchor (or welding).

Bridging—As soon as joists have been erected and before the application of construction loads, joists shall be bridged with a tension type of "underchord" rod bridging consisting of a ½-in. rod placed underneath the top chords of the joists and transversely to them and held in place by means of spring clips engaging the rod and the web members at a panel point. This transverse rod shall be supplemented by $\frac{3}{16}$-in. diagonally placed rods securely wound to both the transversely placed rod and the web members where they meet the bottom chords of joists. For residential construction diagonal steel type bridging, welded to the top and bottom chord members, of the joists, is recommended. For spans up to 14 ft. 0 in. one row of bridging is required; two rows between 14 ft. 0 in. and 21 ft. 0 in.; and three rows over 21 ft. 0 in.

Ceilings—Where directly attached ceiling occurs, Bottom Chord Extensions shall be provided.

Note: The spacing of the Nailer Joists must not be more than the safe span of the flooring over the joists.

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TRUSCON "CLERESPAN" JOISTS

TRUSCON "Clerespan" Joists when employed in floor construction can be used advantageously in buildings for all types of occupancy regardless of their location. In many types of buildings their use will automatically eliminate all columns from the structure with the exception of those in the outer walls. Greater floor areas are thus provided without obstructing columns than has ever heretofore been accomplished. When used in roof construction "Clerespan" Joists meet all requirements of every type of building.

"Clerespan" Joists made of hot rolled structural steel shapes, are designed in accordance with standard engineering practice. Top chords are designed for bending between panel point as well as direct compression.

"Clerespan" Joists all have a camber built in them. They are fabricated by welding in a modern shop noted for its welding equipment and developments in automatic welding.

"Clerespan" Joists possess unusual lateral stiffness. This is due to the high radius of gyration about the vertical axis.

"Clerespan" accessories, such as anchors, lath clips, screed clips, bearing plates, etc., are similar to those used with open truss joists. Diagonal bracing or bridging is provided by hot-rolled angles. Lines of bracing are about 10 ft. apart.

Notes Regarding Table

The weight of dead loads must in all cases be deducted to determine the live load carrying capacities which must be reduced for concentrated loads.

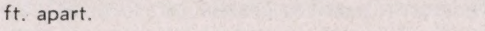
When holes are required in top or bottom chords the carrying capacities must be reduced in proportion to reduction of chord areas.

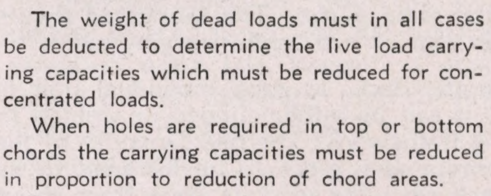
Figures printed in columns to right of heavy vertical line are for roof construction only.

Loads below horizontal zig-zag line are limited by end reaction.

Illustrations below show "Underslung" Clerespan with top chord parallel to bottom. However, they can also be made with square ends, and with square ends the top chord can be parallel to bottom chord or pitched in one or two directions.

The carrying capacities of "Clerespan" with top chords pitched, is determined by the nominal depth of the "Clerespan" Joists at the center of the span.



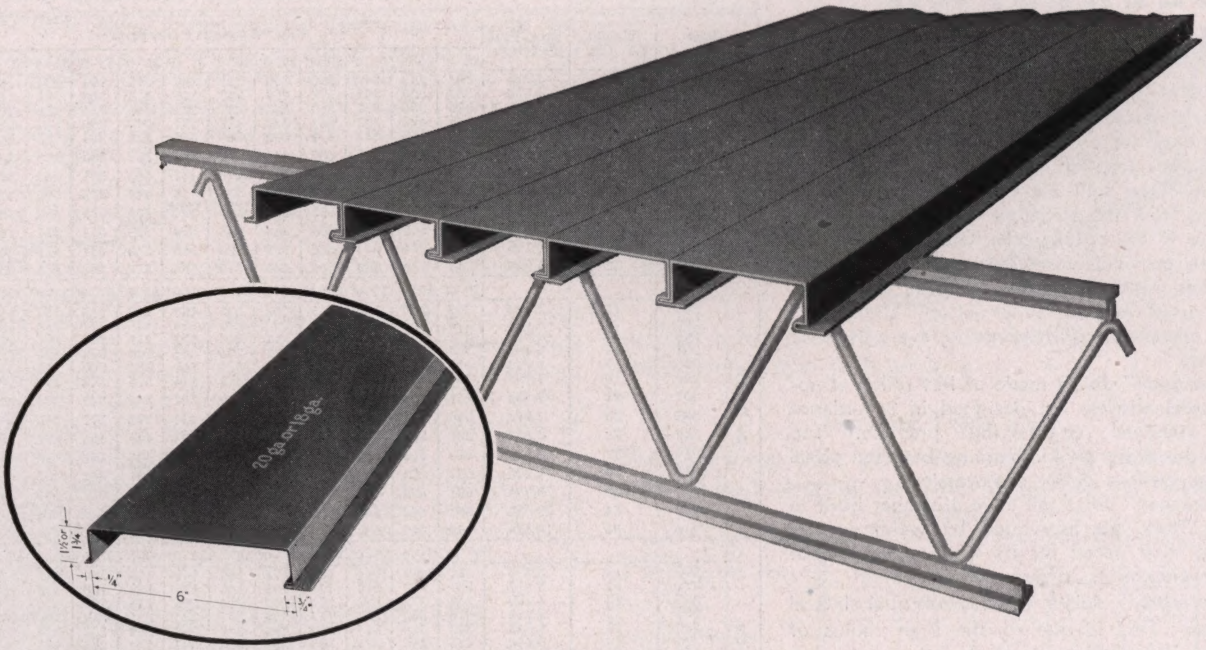


TOTAL SAFE UNIFORM LOAD TABLE

The following table gives the total safe uniformly-distributed load-carrying capacities of Truscon "Clerespan" Joists in pounds per lineal foot of span.

	Joist Types	Weight Lbs./Ft.	Max. End Reaction	Clear Opening or Net Span											
				25'-0"	26'-0"	27'-0"	28'-0"	29'-0"	30'-0"	31'-0"	32'-0"	33'-0"	34'-0"	35'-0"	36'-0"
18" Depths	181	11	3,775	302	285	269	252	236	221	208	196	184	174	165	156
	182	12	4,213	337	320	298	277	259	242	226	212	200	188	178	168
	183	13	4,700	376	356	337	319	302	283	265	248	234	220	208	196
	184	15	5,625	450	422	392	364	340	317	297	278	262	247	233	220
	185	17	6,113	489	462	437	414	392	366	343	322	303	285	269	254
	186	19	6,966	557	536	516	480	448	418	392	368	346	326	307	291
	187	21	7,279	582	560	539	520	502	470	442	415	391	369	349	330
	188	23	7,635	611	587	566	545	527	509	478	449	423	399	377	357
	189	25	8,144	650	626	603	582	561	542	525	509	479	452	426	404
	1810	27	8,531	682	656	632	609	588	568	550	533	517	487	460	434
	1811	29	8,768	701	674	649	626	605	584	566	548	531	516	501	473
	1812	32	9,288	743	714	688	663	640	619	598	580	563	546	531	516
				29'-0"	30'-0"	31'-0"	32'-0"	33'-0"	34'-0"	35'-0"	36'-0"	37'-0"	38'-0"	39'-0"	40'-0"
20" Depths	201	11	3,625	250	238	226	215	203	192	182	172	163	155	148	141
	202	12	4,031	278	267	253	237	223	210	198	187	177	168	160	152
	203	13	4,510	311	296	282	269	257	246	232	219	208	197	187	178
	204	15	5,409	373	354	332	312	293	276	261	246	233	221	210	199
	205	17	5,858	404	385	367	350	334	319	301	284	269	255	242	230
	206	19	7,091	489	464	439	412	387	365	344	325	308	292	277	264
	207	21	7,560	521	504	479	456	433	409	387	366	347	330	314	299
	208	23	7,984	550	532	515	499	471	444	420	398	377	358	340	324
	209	25	8,517	587	568	549	532	516	501	474	449	426	404	385	366
	2010	27	8,995	619	598	580	562	544	528	514	487	462	438	416	395
	2011	29	9,306	642	620	600	582	564	547	532	517	503	477	453	431
	2012	32	9,880	681	658	637	617	598	581	564	549	534	520	493	469
	2013	34	10,023	691	668	647	626	607	590	573	557	542	528	514	489
	2014	36	10,660	735	710	688	665	646	627	608	592	576	561	547	533
				33'-0"	34'-0"	35'-0"	36'-0"	37'-0"	38'-0"	39'-0"	40'-0"	41'-0"	42'-0"	43'-0"	44'-0"
22" Depths	221	11	3,498	212	203	194	186	178	169	161	154	147	140	134	128
	222	12	3,911	237	227	218	207	196	186	176	168	160	152	145	139
	223	13	4,340	263	252	242	232	223	214	206	196	187	178	170	162
	224	15	5,214	316	302	288	273	258	245	233	221	210	200	191	183
	225	17	5,643	342	328	315	302	290	279	268	255	242	231	220	210
	226	19	6,848	415	396	379	360	341	323	307	292	278	265	252	241
	227	21	7,442	451	431	412	394	378	361	344	327	312	298	285	272
	228	23	8,481	514	486	460	436	414	393	374	356	340	324	310	296
	229	25	8,855	537	521	506	484	464	443	421	401	383	365	349	334
	2210	27	9,380	568	552	536	521	507	481	458	436	416	397	379	362
	2211	29	9,750	590	574	557	542	527	513	500	476	454	433	413	395
	2212	32	10,360	628	609	592	575	560	545	531	518	494	471	450	429
	2213	34	10,558	640	621	603	587	571	556	541	528	515	491	468	447
	2214	36	10,987	666	646	625	610	594	578	563	549	536	523	511	488
				37'-0"	38'-0"	39'-0"	40'-0"	41'-0"	42'-0"	43'-0"	44'-0"	45'-0"	46'-0"	47'-0"	48'-0"
24" Depths	242	12	3,774	204	197	190	183	175	167	159	152	145	139	133	128
	243	13	4,200	227	219	211	203	196	189	183	176	170	162	156	149
	244	15	5,069	274	263	253	242	233	220	209	200	191	183	176	168
	245	17	5,458	295	284	274	264	255	246	238	229	220	211	202	194
	246	19	6,642	359	345	331	318	305	290	277	264	253	242	232	222
	247	21	7,215	390	374	360	346	333	321	309	296	283	271	260	250
	248	23	8,288	448	427	406	387	369	353	337	322	309	296	284	272
	249	25	8,862	479	460	442	426	409	394	379	363	347	333	320	307
	2410	27	9,937	537	523	498	475	453	432	413	395	378	363	348	334
	2411	29	10,360	560	545	531	518	494	471	450	431	413	395	379	364
	2412	32	10,773	582	567	552	539	526	513	490	469	449	430	413	396
	2413	34	11,073	598	583	568	554	540	527	515	492	470	450	431	413
	2414	36	11,543	624	608	592	577	563	550	537	525	513	491	470	451
				41'-0"	42'-0"	43'-0"	44'-0"	45'-0"	46'-0"	47'-0	48'-0"	49'-0"	50'-0"	51'-0"	52'-0"
26" Depths	264	15	4,920	240	232	223	216	208	201	193	185	178	171	165	159
	265	17	5,310	259	250	242	234	227	220	213	206	199	191	184	178
	266	19	6,478	316	304	294	283	273	263	252	242	232	223	214	206
	267	21	7,011	342	330	319	308	297	287	278	269	259	249	240	231
	268	23	8,057	393	380	364	348	333	319	307	294	283	272	262	252
	269	25	8,631	421	406	392	378	365	353	342	330	318	306	295	284
	2610	27	9,984	487	466	445	426	408	392	376	361	347	334	321	309
	2611	29	10,563	514	503	484	465	445	427	410	393	378	364	350	337
	2612	32	11,000	537	524	512	500	483	465	446	428	411	396	381	367
	2613	34	11,543	563	550	537	525	513	491	470	451	432	415	399	384
	2614	36	12,032	587	573	560	547	535	523	512	491	471	452	435	418
				45'-0"	46'-0"	47'-0"	48'-0"	49'-0	50'-0"	51'-0"	52'-0"	53'-0"	54'-0"	55'-0"	56'-0"
28" Depths	284	15	4,815	214	207	200	194	187	182	175	169	162	156	151	145
	285	17	5,153	229	223	216	210	204	198	190	184	177	171	165	160
	286	19	6,323	281	272	263	254	247	239	232	223	214	206	199	192
	287	21	6,840	304	294	285	276	268	259	252	244	237	230	222	215
	288	23	7,875	350	338	326	315	303	292	281	271	261	252	243	235
	289	25	8,415	374	362	351	340	329	319	310	300	291	283	273	264
	2810	27	9,765	434	419	403	387	372	358	345	332	320	309	298	288
	2811	29	10,463	465	449	434	420	405	390	376	362	349	337	325	314
	2812	32	11,183	497	481	465	450	436	422	409	394	379	366	353	341
	2813	34	12,190	542	530	509	488	468	449	432	416	400	385	371	358
	2814	36	12,495	555	543	532	521	510	489	470	452	436	420	404	390
				49'-0"	50'-0"	51'-0"	52'-0"	53'-0"	54'-0"	55'-0"	56'-0"	57'-0"	58'-0"	59'-0"	60'-0"
30" Depths	304	15	4,704	192	187	181	176	171	166	161	156	151	145	140	136
	305	17	5,023	205	200	194	188	182	175	170	164	159	154	149	144
	306	19	6,174	252	245	237	231	224	218	211	206	199	192	186	180
	307	21	6,689	273	265	257	250	243	236	230	223	217	211	205	199
	308	23	7,718	315	305	296	287	278	269	259	250	242	234	227	219
	309	25	8,232	336	326	316	307	299	291	232	275	267	259	251	243
	3010	27	9,555	390	378	367	354	341	329	318	307	297	287	278	269
	3011	29	10,241	418	405	393	381	370	359	347	335	324	313	303	293
	3012	32	10,952	447	433	420	408	396	385	374	363	352	340	329	319
	3013	34	12,103	494	479	464	447	430	415	400	386	372	359	347	336
	3014	36	12,825	523	513	498	483	468	451	435	420	405	391	378	366
				53'-0"	54'-0"	55'-0"	56'-0"	57'-0"	58'-0"	59'-0"	60'-0"	61'-0"	62'-0"	63'-0"	64'-0"
32" Depths	328	23	7,553	285	277	270	263	255	249	241	233	226	219	212	206
	329	25	8,056	304	296	288	280	273	266	259	252	244	236	229	223
	3210	27	9.381	354	344	334	325	315	305	295	286	277	268	260	253
	3211	29	10,044	379	368	358	348	339	330	321	311	302	293	284	275
	3212	32	10,733	405	394	383	373	363	353	344	335	326	317	308	299
	3213	34	11,819	446	433	422	410	398	385	372	360	348	337	326	316
	3214	36	12,720	480	467	454	442	430	418	404	391	379	366	355	344

TRUSCON STEELDECK ROOFS



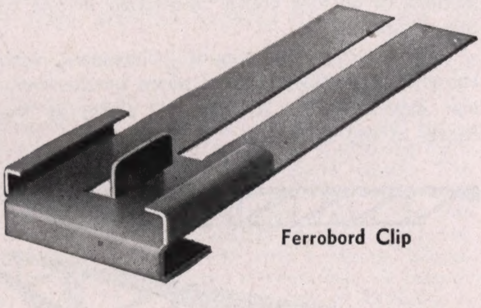
FERROBORD STEELDECK

TRUSCON Ferrobord Steeldeck was developed to offer to the public, through architects and builders, a lightweight steel roof decking, the performance of which could be calculated by means of accepted engineering principles. The result is a parallel system of strong structural interlocking members, predictable in performance, which presents a smooth surface over which can be applied built-up roofing, with or without insulation. Ferrobord is manufactured from both 20-gage and 18-gage copper-bearing strip steel, having an ultimate strength of not less than 50,000 lbs. per square inch. Each unit is 6 in. wide and has a depth of either 1½ or 1¾ in.

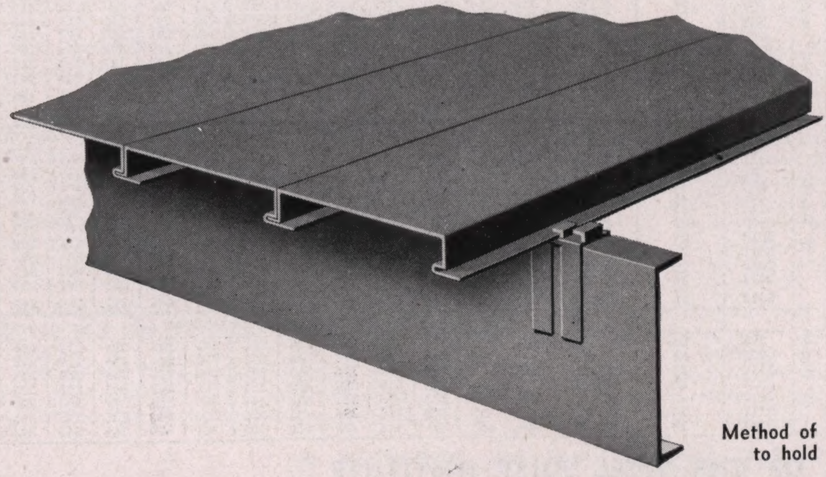
The members are so designed and formed that each unit firmly interlocks with the adjoining unit along the full length, thereby achieving the maximum in lateral distribution of concentrated loadings. The members are fabricated in units long enough to span over three or more purlin spacings (Maximum length recommended for economical erection 40 ft. 0 in.). The deck may therefore be considered as a continuous beam instead of a simply supported beam, with the consequent increase of 25% in carrying capacity. End joints in members are so staggered that no two adjoining units are spliced or butted over the same purlin. The fabricated sheets receive a shop coat of rust inhibitive gray paint.

In erecting the deck, as each individual unit is laid in place, it can be either clipped or welded to the supporting framework. The narrow width of the deck unit permits each piece to be fastened to its support at each rib. The work is done from above precluding the necessity for the use of scaffolding or movable stages during erection.

Ferrobord is adaptable to flat, or pitched, or curved roofs. The 1½-in. deck may be shop curved to a minimum radius of 60 ft. 0 in. and the 1¾-in. deck to a minimum radius of 75 ft. 0 in.

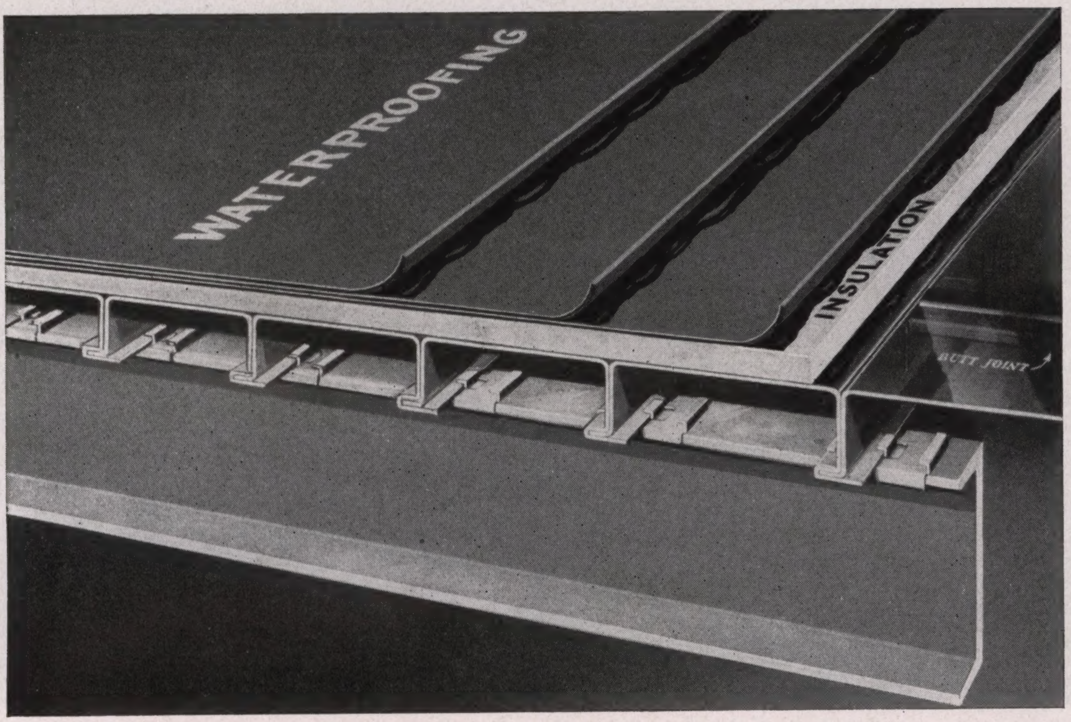


Ferrobord Clip



Method of applying Ferrobord Clip to hold roof sheet to purlin

TRUSCON STEELDECK ROOFS



FOR the reduction of heat transmission, and the elimination of condensation, Truscon Ferrobord Steeldeck may be insulated to any required degree of efficiency. The top surface of Ferrobord steeldeck when laid, presents a smooth, unbroken face, without openings, that constitutes an ideal surface for the application of insulation and built-up waterproofing.

The Truscon Steel Company maintains branch offices in many of the large cities, and the services of Truscon engineers are available for assistance in the laying out of the steeldeck.

The Truscon Steel Company will be glad to co-operate with the local roofing company in the selection of the proper type of insulation and built-up roofing.

FERROBORD SAFE LOADING TABLES

		Properties Per Foot of Width			SPAN												
Gage	Dept.	Weight in Lbs.	Section Modulus	Mom. of Inertia	4′ 0″	4′ 6″	5′ 0″	5′ 6″	6′ 0″	6′ 6″	7′ 0″	7′ 6″	8′ 0″	8′ 6″	9′ 0″	9′ 6″	10′ 0″
20	1½″	2.54	.208	.228	217	171	139	115	96	82	71	62	54	46	39	..	..
18	1½″	3.36	.268	.294	279	220	179	148	124	106	91	79	70	60	50	42	36
20	1¾″	2.66	.261	.329	271	215	174	144	121	103	89	77	68	60	54	48	42
18	1¾″	3.52	.337	.425	351	277	225	186	156	133	115	100	88	78	69	62	54

Calculations for loads indicated in the above table are based on a bending moment of $\frac{WL}{10}$, with the assumption that the Ferrobord units will span over three or more purlin spacings. The resulting unit stresses do not exceed 20,000 lbs. per square inch.

Loads given are in pounds per square foot, and include both dead and live loads.

In all of the above spans the deck will support a concentrated load of 225 lbs. distributed laterally over a width of 18 inches. Deflection limit $\frac{1}{250}$ span. Loads to the right of the zig-zag line have been reduced to keep within this limit.

Note: Insulation and built-up roofing will weigh approximately 2.5 lbs. per sq. ft.

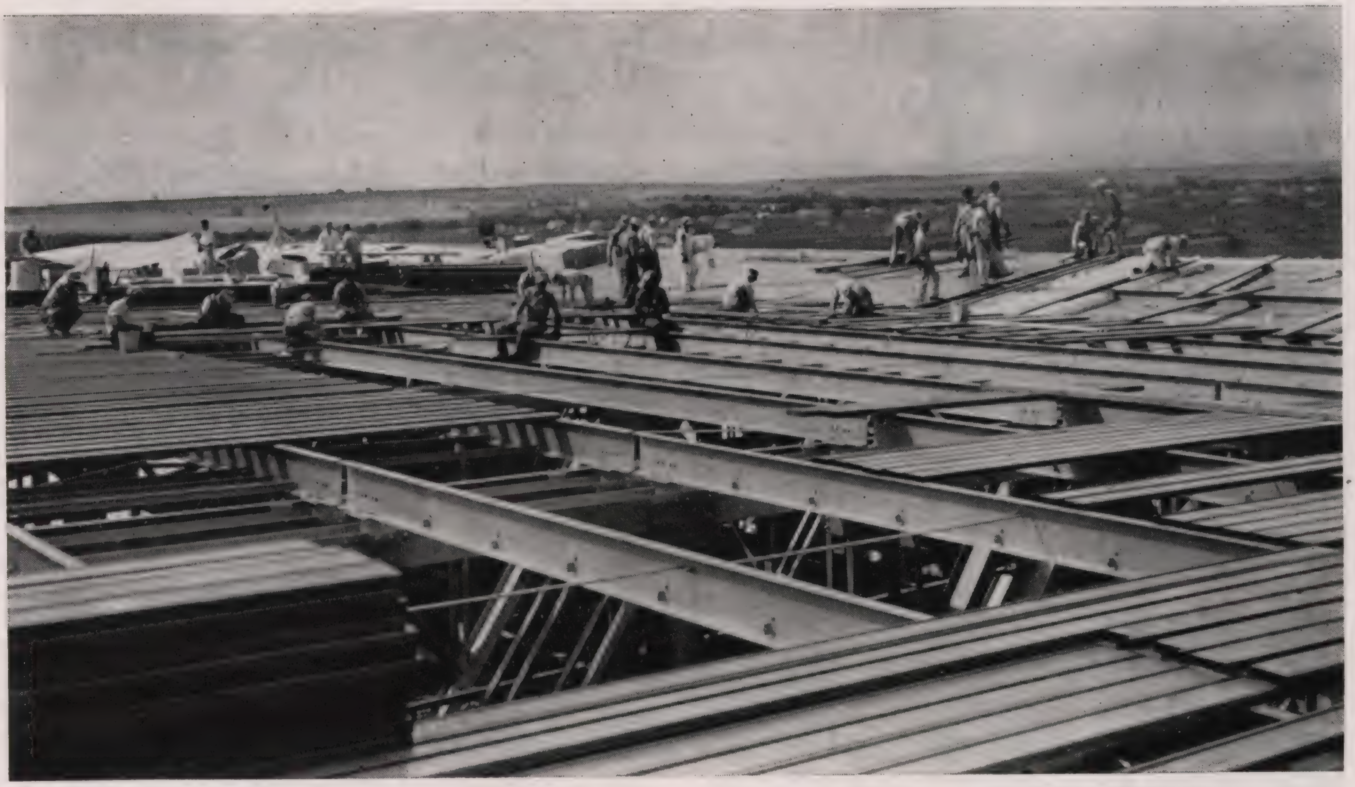
TRUSCON STEELDECK ROOFS—INSTALLATIONS

AIRCRAFT ASSEMBLY PLANT

A streamlined giant is this completely air-conditioned assembly plant. Nearly a mile long and a city block wide, this enormous building was completed in record time with the help of Truscon Ferroglas for walls and ceiling . . . an outstanding product of Truscon's well-known engineering skill and production facilities.

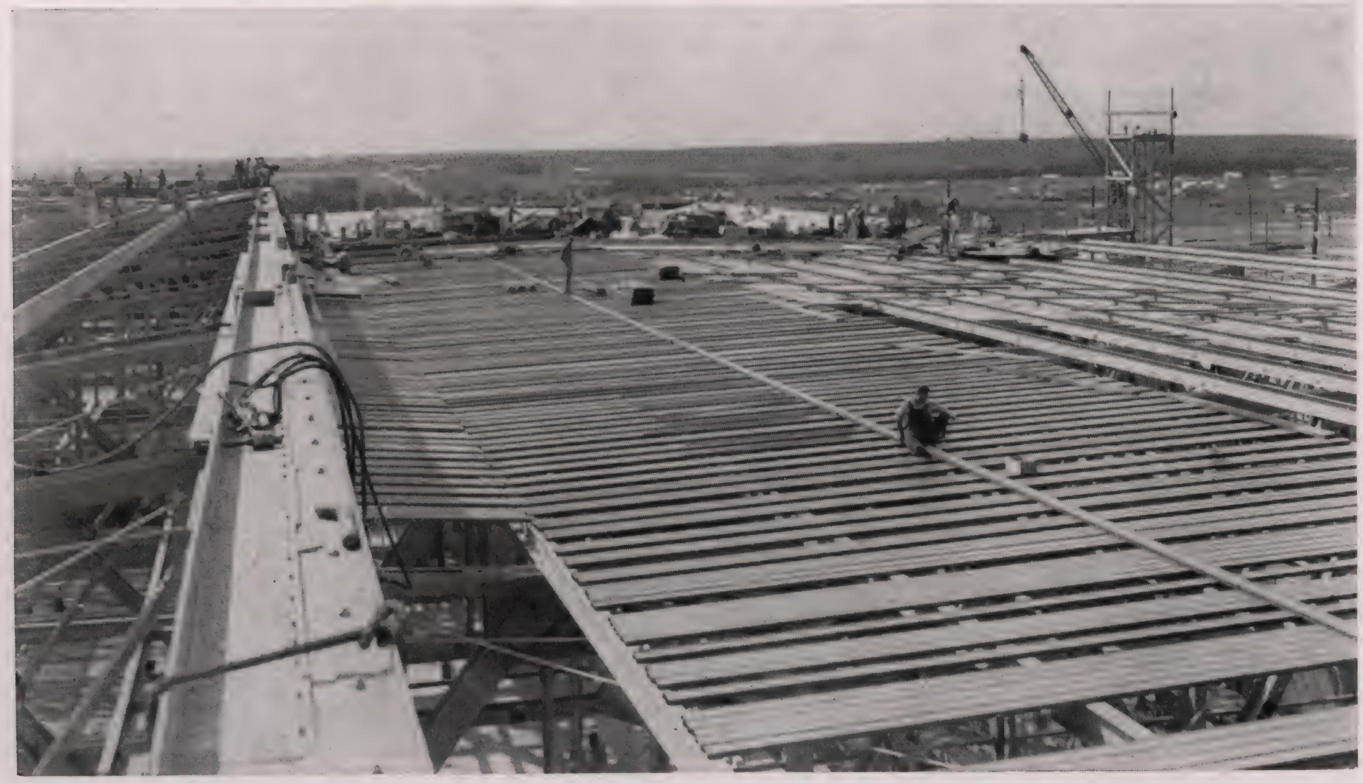
Fundamentally, Ferroglas panels are built-up laminations of Truscon formed steel sheets and Fiberglas insulation. In the essential qualities of

TRUSCON STEELDECK ROOFS—INSTALLATIONS



insulation, sound absorption, fire resistance, interior light reflection and diffusion, Truscon Ferroglas panel construction excels any previous specification requirements!

Over 1,600,000 square feet of Truscon Ferrobord Steeldeck Roof were used in this unusually large building. Photograph at the bottom of page 10 illustrates method of applying built-up roofing; on page 11, photographs illustrate the application of Truscon Ferrobord Steeldeck to the purlins prior to the placing of Fiberglas roof insulation.



NOTE: See Section 16a/19 for complete information on Truscon Steel Windows and Steel Doors.

TRUSCON METAL LATH PRODUCTS

Resists Fire

Resists Cracks

Permanent

RESISTS FIRES—PREVENTS CRACKS LASTS INDEFINITELY

Metal Lath is the plaster base for walls and ceilings that meets all the requirements of modern construction. It is easy to erect and work over, yet is capable of being formed into unusual shapes for arches, coves, plaster fireplaces, and curved walls and stairways. Metal Lath actually grips the plaster, locking it around the strands of steel, which form the openings, holding the plaster in place, even though subjected to violent shocks and vibration.

It is further significant that building codes in all principal cities specify Metal Lath in such structures as schools, hospitals, theatres, and buildings in congested areas, for the fire-resistive qualities it affords. Underwriters Laboratories tests show that wood construction with a protective finish of Metal Lath and plaster is safeguarded against the attack of destructive fires for well upwards of one hour. Plaster calcines, when subjected to sufficient heat, lose their hardness and become powdery, but even though calcined, if held in place by Metal Lath, it offers an effective barrier against fire.

This Underwriter's Rating established the extraordinary fire-resistance of Metal Lath as compared with other interior construction and emphasizes the safety of lumber when protected by Metal Lath and Plaster.

Subdivision of floor areas by means of partitions so as to secure the greatest number of occupancy factors at minimum cost is accomplished by the use of 2-in. solid Metal Lath and Plaster Partitions. The adaptability of Solid Metal Lath Partitions results in numerous economies in construction costs. Their space-saving, weight, and upkeep economy, coupled with high efficiencies in fire-resistance, sound-resistance, crack and impact resistance, sanitation, low cost, and their general all-around superiority over other construction commonly used, give Solid Metal Lath and Plaster Partitions preference. They are better suited than other type partitions for non-bearing subdividing partitions within apartments and for corridors. They are advantageously used for the inclosure of stairways, elevators, shafts, dumbwaiters, penthouses, fan and motor rooms, and for ventilating shafts.

All Truscon metal lath products are manufactured in accordance with U. S. Dept. of Commerce, Simplified Practice Recommendation R344.

Easily Formed

Resists Sound

Corner Beads Protect Exposed Corners

TRUSCON METAL LATH PRODUCTS

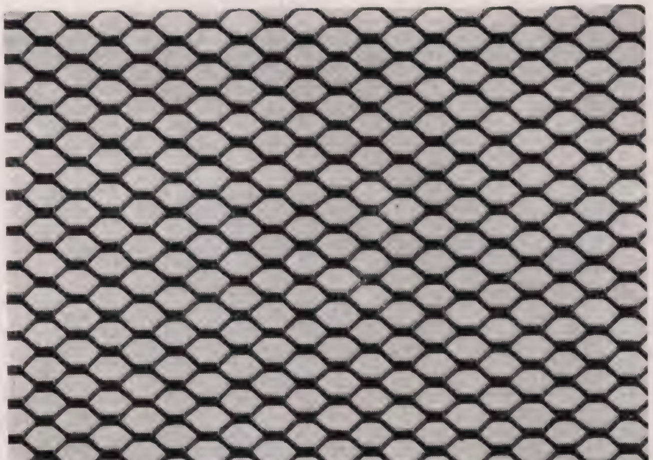
TRUSCON Diamond Metal Lath

TRUSCON Diamond Lath is a flat metal lath, uniformly expanded throughout the entire sheet. Its use is almost universal, for it is adaptable for practically all classes of work—as a base for walls, partitions, ceilings, as a reinforcement for stucco, as a protection for steel beams, and columns, and for protecting hazardous points in wood frame construction—such as ceilings under inhabited floors, especially over heating plants and coal bins, around flues, and back of kitchen ranges, stair wells, and under stairs.

Diamond Lath has more openings in a given area, with a proportionate increase in the area of steel. The increased proportion of steel gives the sheets great rigidity. They are easily handled and quickly erected, and less time is taken in applying the scratch coat and truing up the wall than with ordinary diamond lath. The small openings prevent excess penetration of plaster, thus minimizing droppings. The larger number of openings permits the formation of more keys to give efficient bondings of the plaster to the lath.

Truscon Diamond Lath is made in sheets 27 x 96 in., the largest practical size. It is made by the center expanding process, and after expansion each sheet is passed between heavy rolls to make it smooth and flat and remove any distortion. The ends of each sheet are trimmed square and true.

Weights per Sq. Yard		Sizes of Sheets, Inches	Area of Sheets, Sq. Yds.	Sheets per Bundle	Sq. Yds. per Bundle	Weight per Bundle
Galv.	Copper Alloy Painted					
	2.5	27 x 96	2	10	20	50
3.4	3.4	27 x 96	2	10	20	68



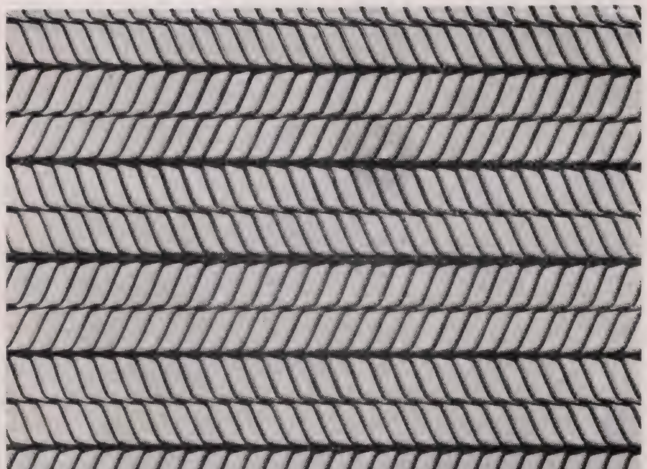
Diamond Lath

TRUSCON *Herringbone Doublemesh Metal Lath

TRUSCON Herringbone Doublemesh is a flat rib lath designed for interior, one side plastering. It embodies all the advantages of Metal Lath in general, and in addition, because of its scientific design, offers construction features which make it the most preferred lath for its particular purpose on the market.

The large size of the sheets (27 x 96 in.) means less labor is required to lath a room. At the same time, the interlocking edges afford a perfect joint without wastage of material at the laps. A study of the Herringbone Doublemesh pattern will show why less plaster is required to do a good job. Herringbone Doublemesh has a small mesh between the ribs, approximately 1200 to the square foot. The longitudinal ribs are at an angle to the plane of the sheet, and serve as supporting and reinforcing members for the lath and plaster. They serve as baffle plates to deflect the excess mortar back against the trowel, and as shelves upon which the mortar rests and is held in place while setting. Because of the rigidity of the sheets no stretching is required, and studs may be placed farther apart without the lath sagging or bending when plaster is applied; hence no leveling off to do when the brown coat of plaster is applied.

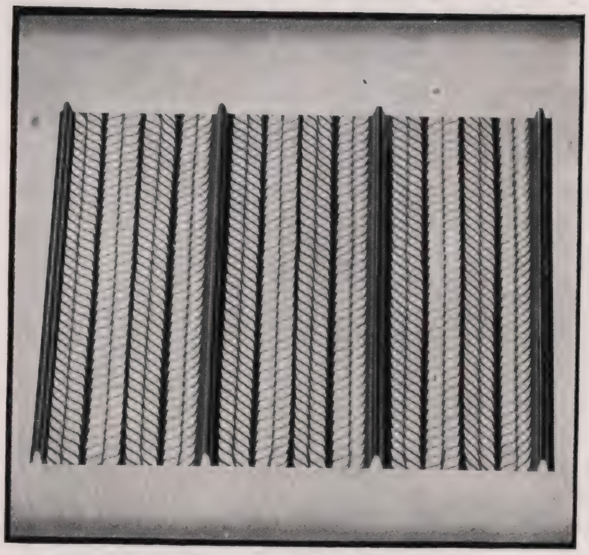
Weights per Sq. Yard	Size of Sheets, Inches	Area of Sheets, Sq. Yds.	Sheets per Bundle	Sq. Yds. per Bundle	Weight per Bundle
Copper Alloy Painted					
2.75	27 x 96	2	10	20	55.5
3.4	27 x 96	2	10	20	68



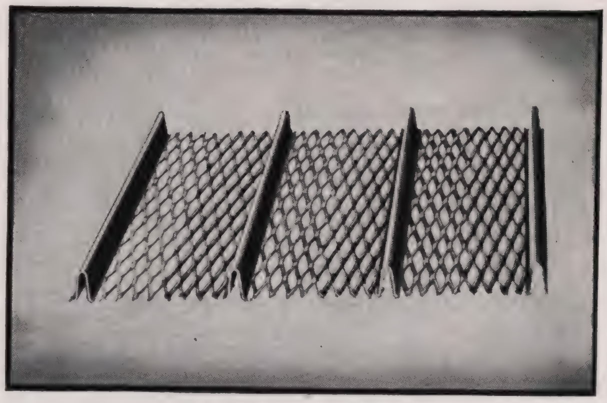
Herringbone Doublemesh Lath

*Reg. U. S. Pat. Off.

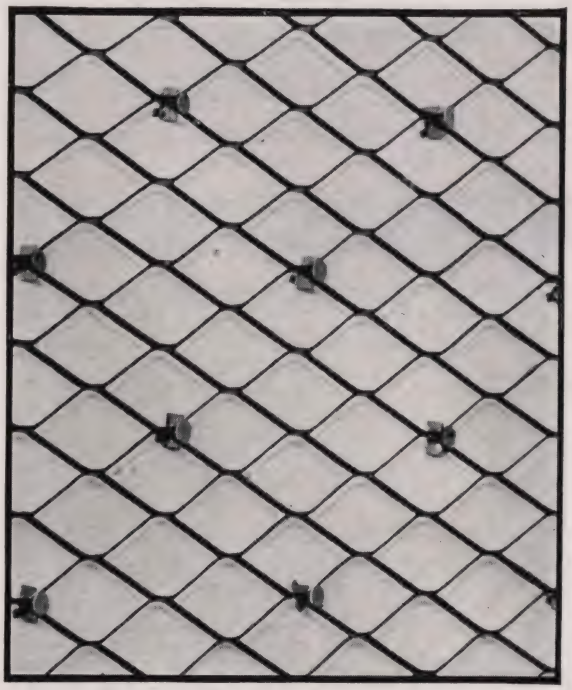
TRUSCON METAL LATH PRODUCTS



3/8-in. Ribplex Lath



Self-Sentering Lath



Stucco Mesh

TRUSCON 3/8-in. Ribplex Lath

The extreme rigidity of Ribplex Lath due to the 3/8-in. Ribs, on 4-in. centers, permits a wider spacing of studs and ceiling supports. The ribs take the place of furring strips—a saving of material and time of erection, and nest together at sides and ends to make a rigid splice and a uniform plastering surface.

3/8-in. Ribplex Lath is furnished in copper alloy steel standard sheets 24 in. wide by 96 in. long. Packed 9 sheets—16 square yards per bundle. The flattened strands in 3/8-in. Ribplex decrease the size of the mesh openings and give a perfect key while requiring a minimum amount of plaster. The stiff sheets are convenient to handle and easy to erect. There are no sharp cutting edges. Sheets are true to size and both ends are resquared after forming.

TRUSCON *Self-Sentering Lath

Truscon Self-Sentering is a ribbed expanded metal lath with the ribs 11/16 in. high and spaced 3 5/8 in. on center. The ribs are connected by a diamond mesh—all cut and drawn from one sheet of steel. A beveled edge where the mesh and ribs join adds considerably to the strength of the sheet. Self-Sentering serves as both form and reinforcement for concrete floors and roofs, sidewalls, partitions in industrial buildings, office buildings, schools, warehouses, and garages.

Self-Sentering sheets are 29 in. wide, the widest of any material made for a similar purpose, thus decreasing the number of laps and resulting in an appreciable saving in erection labor. The sheets can be curved at the factory to any desired radius, 12 in. or larger, with the ribs always on the outside of the arc, making it adaptable for arched floor or roof slabs, tanks or culverts.

Bundled 10 sheets per bundle. Furnished in copper alloy steel. Furnished in 8-, 10- and 12-ft. lengths.

TRUSCON Stucco Mesh

Many builders prefer a wide mesh, heavy strand expanded metal for stucco construction. Truscon Stucco Steel is an excellent material for this type of work. The diamond shaped mesh 1 1/2 x 3 in. has proved to be most satisfactory, and the heavy cross section of the strands adds great strength. Stucco Steel is made in 8-ft. 0-in. lengths only, and in either 2-ft. 0-in. or 4-ft. 0-in. widths. A special type of nail is used for attaching Stucco Steel to sheathing. This nail acts as a furring device, and securely locks the Stucco Steel 3/8 in. from the sheathing.

Wt. in Lbs. per Sq. Yd. Copper Alloy Steel	Size of Sheet, Inches	Sheets per Bdl.	Sq. Yds. per Bdl.	Wt. in Lbs per Bdl.
1.8	24 x 96	9	16	28.8
1.8	48 x 96	9	32	57.6
3.6	24 x 96	5	8-8/9	32.0
3.6	48 x 96	5	17-7/9	64.0

Furring Nails
6 lbs. per 1000 pcs.
Packed 1000 pcs. per carton

*Reg. U. S. Pat. Off.

TRUSCON METAL LATH PRODUCTS

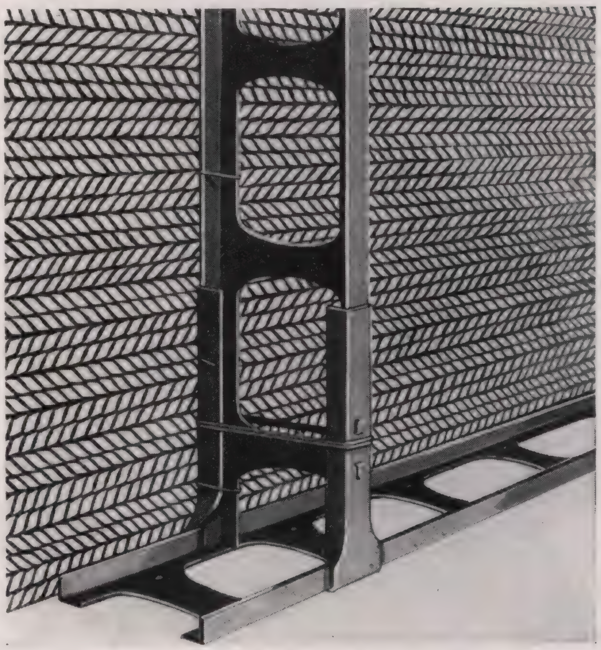
TRUSCON Hollow Partition Studs

Truscon Hollow Partition Studs are fire-safe, provide excellent heat insulation, sound resistance and are rodent and termite proof. They will not swell nor warp and will resist impact, vibration or plaster cracking much more effectively than partitions of masonry or gypsum block.

When metal lath is attached to both sides of these studs, an ideal base for plaster is obtained. There is no necessity for cutting expensive chases for electrical conduits or pipes as the design of these studs provides maximum room for their passage without sacrificing the strength of the studs.

Due to the simplification and light weight of units, labor costs are materially reduced. The adaptability of Truscon Studs permits uninterrupted operation of all trades. After the studs are set, plumbing and electrical work can be started immediately. The partition is then lathed and plastered.

Truscon Hollow Partition Studs when plastered, weigh sixteen to twenty pounds per square foot, depending on the thickness of plaster grounds and consequently permit economical structural design without decreasing strength.



Hollow Partition Studs

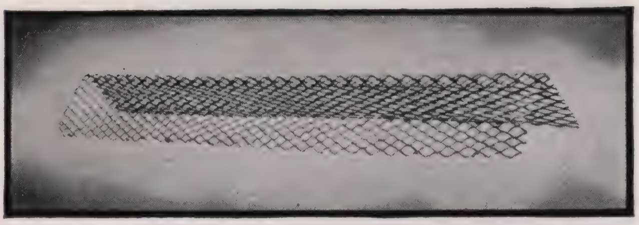
TRUSCON Cornerite

Truscon Cornerite is a practical and economical reinforcement for all inside plaster corners. Truscon Cornerite is furnished with selvedge edge, and, being machine made, it is straight and true and easy to plaster over.

Furnished in standard sizes of 2 x 2 in. and 3 x 3 in. in 8-ft. 0-in. lengths.

Packed 600 lineal feet per bundle.

Weights: 2 x 2 in., 80 lbs. per MLF; 3 x 3 in., 120 lbs. per MLF.



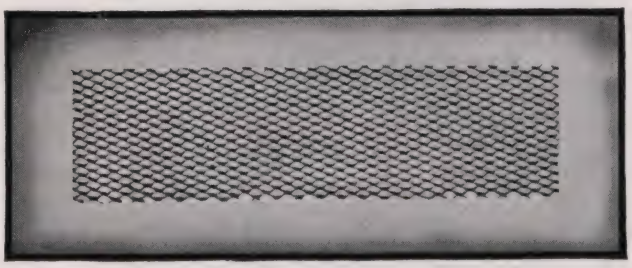
Cornerite

TRUSCON Strip-Ite

Truscon Strip-Ite is furnished with selvedge edges in standard widths of 3 in. in 8-ft. 0-in. lengths.

Packed 600 lineal feet per bundle.

Weight: 3 in., 60 lbs.



Strip-Ite

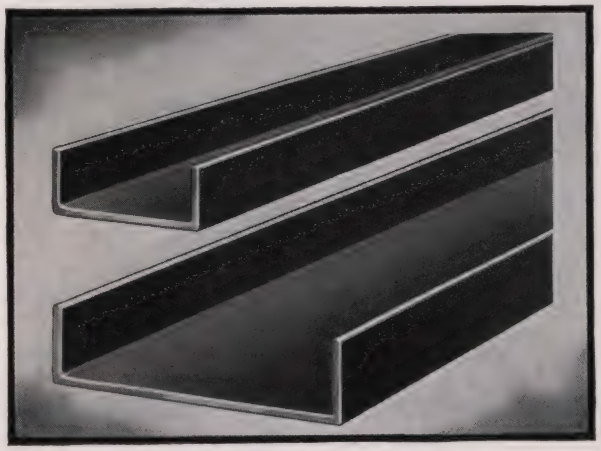
TRUSCON Cold Rolled Channels

Truscon Cold Rolled Channels are straight and true with square corners that prevent rolling. Flanges are approximately $\frac{7}{16}$ in. high, widths are ¾ and 1½ in., standard lengths 16 and 20 feet. Furnished painted only.

¾-in. channels shipped 20 pieces to the bundle.

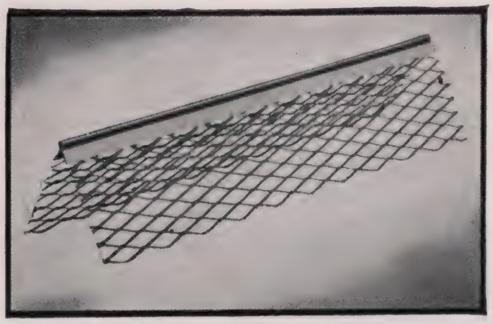
1½-in. channels shipped 10 pieces to the bundle.

Weights per 1000 lineal feet are as follows: ¾-in. channel, 300 lbs.; 1½-in. channel, 475 lbs.

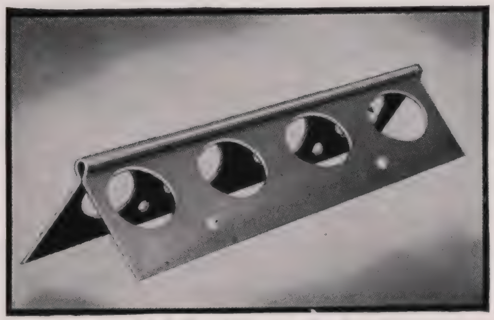


Cold Rolled Channels

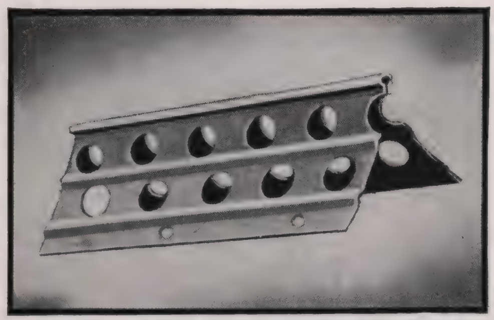
TRUSCON METAL LATH PRODUCTS



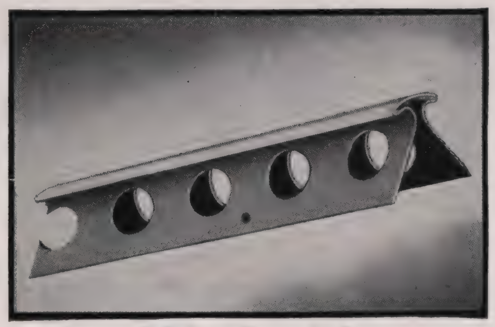
Expanded Corner Bead



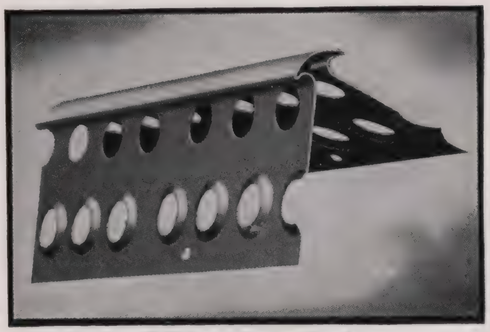
Rib Steel Corner Bead



Wide Flange Corner Bead



Bull Nose Corner Bead
¾-in. Radius Standard Short Wing



Bull Nose Corner Bead
¾-in. Radius, 2½-in. Plain Wing

TRUSCON Expanded Corner Bead

Truscon Expanded Corner Bead is used to protect exposed plaster corners and is manufactured from 36 gauge tight coat galvanized steel, with a 2½-in. expanded flange and a heavy shoulder to assure straightness and rigidity. The round nose is strongly reinforced by a deep groove which holds the plaster flush for a perfect bond. Real economies are possible in labor costs in the erection of Truscon Expanded Corner Bead. It can be wired, stapled, nailed, or "stuck" to any kind of wall construction without the use of clips.

Furnished in standard lengths of 8, 9, 10 and 12 feet.

Weight—230 lbs. per thousand lineal feet.

TRUSCON Rib Steel Corner Bead

Truscon Rib Steel Corner Bead is also recommended as an exposed corner reinforcement and is manufactured from 26 gauge tight coat-galvanized steel, with a perforated flange 1¾ in. wide. Rib Steel Bead can be used as an arch bead for curved openings, by cutting the flange, and bending to shape by hand. It forms a perfect arch and will not kink or break at the nose.

Furnished in standard lengths of 8, 9, 10 and 12 feet.

Weight—185 lbs. per thousand lineal feet.

TRUSCON Wide Flange Corner Bead

Truscon Wide Flange Corner Bead is manufactured from 26 gauge tight coat galvanized steel, with a 2½-in. wide flange reinforced with two corrugations spaced 1 in. apart running parallel to its length. Two ⅝-in. diameter holes spaced ½ in. on centers provide exceptional bond for the plaster. This bead is recommended for all kinds of masonry walls, columns, or beams (Gypsum Block, brick, tile or concrete) because it will allow a plumb straight line to be formed, and due to the long flange can be erected quicker, and will not be pushed out of alignment.

Furnished in standard lengths of 8, 9, 10 and 12 feet.

Weight—330 lbs. per thousand lineal feet.

TRUSCON Bull Nose Corner Bead

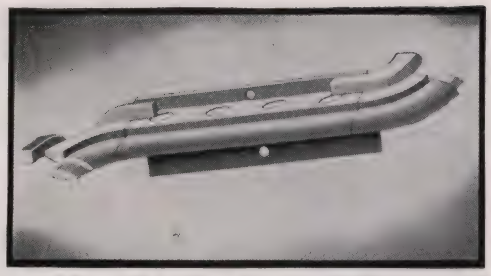
Used principally to protect plaster at exposed corners and as window casings. Especially recommended for use in corridors of hospitals, schools, and similar buildings where traffic is unusually heavy. Bull Nose Corner Bead is furnished in standard lengths of 7, 8, 9, 10 and 12 feet. Short flange 255 lbs. per M lineal feet. Wide flange 440 pounds per M lineal feet.

Following Table Applies to Expanded, Rib Steel, Wide Flange and Bull Nose Corner Beads

LENGTH	PCS. PER CRATE	FEET PER CRATE
7′-0″	80	560
8′-0″	70	560
9′-0″	60	540
10′-0″	50	500
12′-0″	50	500

TRUSCON METAL LATH PRODUCTS

TRUSCON Curved Point Base Screed

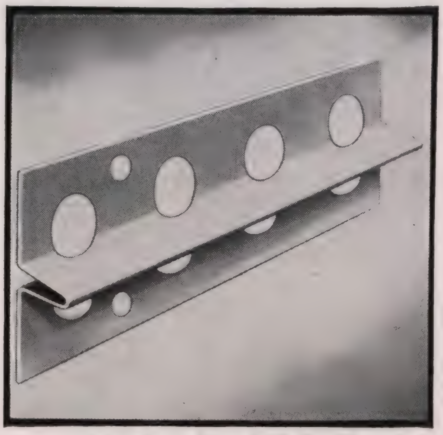


Curved Point Base Screed with Fittings

Truscon Curved Point Base Screed is manufactured from 26 gauge tight coat galvanized steel. This product is designed to form a smooth curved top for protecting plaster bases of terrazzo, cement or composition, and to protect the top of the base against damage. Curved Point Base Screed also forms a permanent separation between the two materials, and a working line for both in the same manner as Flush Base Screed.

Furnished in standard lengths of 10 ft. 0 in.
Packed 100 pieces per crate.
Weight: 195 lbs. per thousand lineal feet.

TRUSCON Flush Base Screed

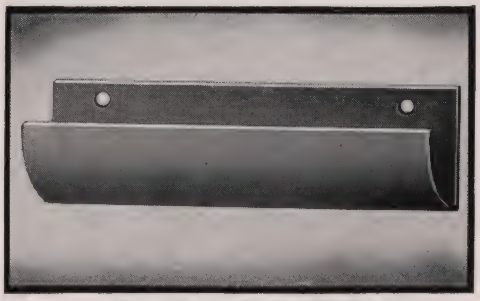


Plain Flush Type Base Screed

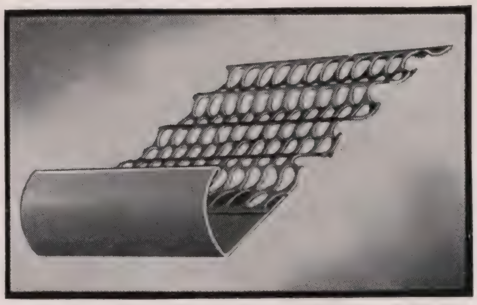
Truscon Flush Type Base Screed is manufactured from 26 gauge tight coat galvanized steel. It is used principally for separating two plaster materials of different character, such as separating plaster walls from cement, terrazzo, or composition base, and separating a cement wainscot from ordinary plaster. Another function is to give a permanent straight edge to which both the trades work.

Furnished in standard lengths of 10 ft. 0 in.
Packed 100 pieces per crate.
Weight: 160 lbs. per thousand lineal feet.

TRUSCON Casings



Short Flange Casing TK-36



Wide Flange Casing TK-72

Metal casings meet a definite demand for an artistic and yet strictly sanitary method of trimming around doors and windows. The architectural effects possible with this modern product are many. Metal casings are fire-resistant, vermin proof, easy to maintain and do not shrink or warp.

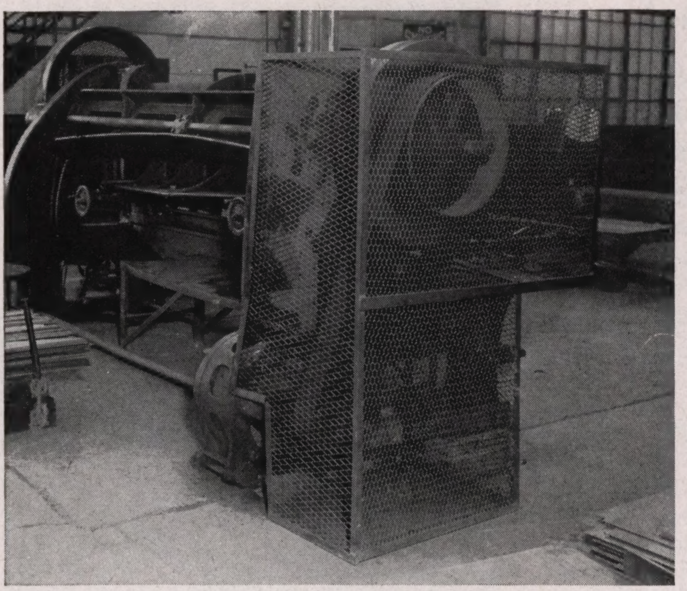
Casings are manufactured from 24 gauge tight coat galvanized steel. Short flange weighs 220 lbs. per M lineal feet, wide flange weighs 340 lbs. per M lineal feet. Furnished in 7-, 8- and 10-ft. lengths, ¾- and ½-in. grounds.

TRUSCON Tie and Hanger Wire

Tie Wire

Made from special quality soft annealed wire strengthened by a special process. Tie wire furnished in 16 and 18 gauge galvanized—25-pound hanks or coils. Hanger wire furnished in No. 8 gauge galvanized coils.

TRUSCON EXPANDED METAL



TRUSCON Expanded Metal is a diamond mesh fabric expanded into flat sheets from a solid plate of low carbon open hearth steel. The steel is cut and drawn so that regular and even diamonds are formed with uniform strands.

Truscon Expanded Metal is a utility product and can be employed in diversified uses when the nature of the work requires an open mesh material that is strong, light in weight, easy to handle and rigid but workable.

Machine guards, door grilles, partitions, window guards, and similar enclosures are easily fabricated from the smaller size mesh. The larger and heavier types are used for all types of concrete reinforcing where it provides an ideal distribution of steel. The sectional area of Expanded Metal is machine made, which assures absolute structural value.

TYPES AND PROPERTIES

Type Number	Size of Diamond C-C of Strand	Gauge	Weight Lbs. per sq. ft.	Standard Sizes of Sheets		Cross Sectional Area
				Lengths Long Way of Diamond	Widths Short Way of Diamond	
3-059	3″ x 8″	16	.20	6′, 8′, 10′-8″	4′, 8′	.059
3-08	3″ x 8″	16	.27	6′, 8′, 10′-8″	3′, 4′, 6′	.08
3-10	3″ x 8″	12	.34	6′, 8′, 9′, 10′-8″	4′, 8′	.10
3-125	3″ x 8″	12	.42	6′, 8′, 9′, 10′-8″	4′-2″, 6′-3″	.125
3-15	3″ x 8″	10	.51	6′, 8′, 9′, 10′-8″	3′-6″, 4′, 7′	.15
3-176	3″ x 8″	10	.60	6′, 8′, 9′, 10′-8″	3′, 4′, 6′	.176
3-20	3″ x 8″	10	.68	6′, 8′, 9′, 10′-8″	3′-6″, 7′	.20
3-25	3″ x 8″	10	.85	6′, 8′, 9′, 10′-8″	4′-3″, 5′-8″	.25
3-30	3″ x 8″	10	1.02	6′, 8′, 9′, 10′-8″	3′-6″, 7′	.30
3-35	3″ x 8″	10	1.19	6′, 8′, 9′, 10′-8″	3′, 4′, 6′	.35
2¼-10	2¼″ x 6″	16	.34	6′, 8′, 10′-6″	4′, 5′	.10
2¼-15	2¼″ x 6″	12	.51	6′, 8′, 10′-6″	3′-6″, 7′	.15
1-8	1⅜″ x 3″	17	.20	6′, 8′	2′, 4′	.06
3-6	1⅜″ x 3″	17	.40	8′	2′, 4′	.12
½-22	½″ x 1.2″	18	.74	6′, 8′	3′, 4′-6″	.22
¾-15	¾″ x 2″	16	.51	6′, 8′	4′-4″, 6′-6″	.15
¾-24	¾″ x 2″	12	.80	6′, 8′	4′-4″, 6′-6″	.24
¾-35	¾″ x 2″	10	1.19	6′, 8′	3′, 4′-6″	.35
1⅜-18	1⅜″ x 3″	12	.60	6′, 8′	3′, 4′-6″, 6′	.18
1⅜-24	1⅜″ x 3″	12	.80	6′, 8′	3′-6″, 7′	.24
1⅜-35	1⅜″ x 3″	10	1.19	6′, 8′	3′, 4′, 6′	.35

Furnished plain, painted, enameled, bonderized, galvanized or expanded from aluminum and stainless steel.

OTHER USES FOR TRUSCON EXPANDED METAL

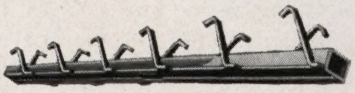
In addition to the more general uses illustrated, Truscon Expanded Metal can be economically used in the manufacture of such products as:

TREE BOXES
HOT AIR REGISTERS
LOUVERS
RADIATOR COVERS
REFUSE BURNERS
AIR FILTERS
WASTE BASKETS
TRUCK BODY ENCLOSURES
GLOBE PROTECTORS for ELECTRIC LIGHTS

We will be glad to give engineering and designing assistance to manufacturers interested in specialized uses of this nature. This service involves no obligation.

TRUSCON PRESSED STEEL INSERTS

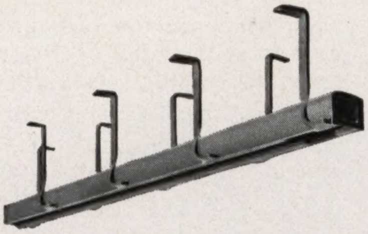
SLOTTED INSERTS



TRUSCON Slotted Inserts are attached to the forms and are completely embedded in the concrete construction. Only the narrow slot flush with the concrete is seen in the completed work. The bolt can be moved along this slot to any location, allowing wide variation in position. Truscon Slotted Inserts are used with equal success in ceilings, slabs, beams or columns. The anchors are integral with the insert and occur every 6 in. on each side.

Standard lengths 12, 18, 24, 36, 48 and 60 in. Any desired length or run is obtained by removing end caps and butting the open ends together.

BRICK INSERTS



TRUSCON Brick Slotted Inserts have all the qualities and properties of Truscon Concrete Slotted Inserts.

The prongs are so bent that they provide positive anchorage of the insert to masonry. They are furnished in standard lengths of 12, 18, 24, 36, 48 and 60 in.

ADJUSTABLE INSERTS

TRUSCON Adjustable Inserts are made of pressed steel and have the same simple method of application to concrete and adjustment for bolts as the slotted inserts, but without their wide range of adjustability. Carry ½, ⅝- and ¾-in. bolts.

TAPPED INSERTS

TRUSCON Tapped Inserts are made from pressed steel of highest quality, and furnished tapped for ⅜-, ½, ⅝- and ¾-in. bolts. Particularly adapted for work where arrangement has been determined before start of construction. Where required, this type of insert can be furnished tapped for ⅜ or ½ in. pipe.

CARRYING CAPACITIES

Since the supporting capacity of inserts is largely dependent on strength of the concrete and bolts, we cannot guarantee any particular loading. The following working loads have been determined by tests and give a factor of safety of at least four.

Inserts	For average good concrete
Slotted Inserts	2000 lbs. per lin. ft.
Adjustable Inserts: ½ in.	800 lbs. per insert
Adjustable Inserts: ⅝ and ¾ in.	1300 lbs. per insert
Tapped Inserts: All sizes	1500 lbs. per insert

TRUSCON STEEL BARS FOR REINFORCING

CONCRETE REINFORCING BARS

CONCRETE reinforcing bars are special rolled sections of high grade steel with a series of longitudinal and diagonal ribs so designed as to provide the maximum bond with the enclosing concrete.

Concrete bars are used for the reinforcement of concrete slabs, beams and girders, columns, walls and footings, in the construction of buildings, bridges, tanks and all other concrete structures subject to tension and compression stresses.

Our concrete bar fabricating plants are strategically located throughout the country in order to economically serve our customers. Bars are fabricated in these plants to meet the engineering requirements of individual jobs. They are delivered to the job cut to length, bent, bundled and properly tagged. If desired, our engineering department furnishes completely detailed placing drawings for the convenience of the steel erectors.

The standard sizes listed have been adopted by all producers in cooperation with the Division of Simplified Practice of the U. S. Department of Commerce. They eliminate duplications of equivalent areas and meet every requirement of efficient design.

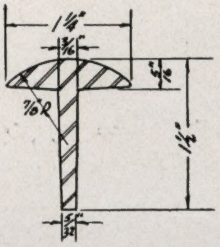
STANDARD SIZES OF DEFORMED BARS

Square inches Area	Equivalent to	Weight per lineal foot
.05	¼″ round*	.167 lbs.
.11	⅜″ round	.376 lbs.
.20	½″ round	.668 lbs.
.31	⅝″ round	1.043 lbs.
.44	¾″ round	1.502 lbs.
.60	⅞″ round	2.044 lbs.
.79	1″ round	2.670 lbs.
1.00	1″ square	3.400 lbs.
1.27	1⅛″ square	4.303 lbs.
1.56	1¼″ square	5.313 lbs.

*Plain round.

TRUSCON CURB BARS

Curb Bar



BY protecting the upper outside corner of a concrete curb with a satisfactory steel plate the curb becomes superior in appearance and more wear-resisting.

Curb bars are manufactured from a specially designed rolled steel section embodying the following distinctive features:

1. Ample width (1⅝ in.) and thickness of exposed plate.
2. Edges of plate beveled to prevent any possibility of feather edge forming at junction of concrete and plate.
3. Plate surrounds and protects the corner without splitting the concrete into two portions.
4. Absolute anchorage into the concrete.
5. Unit of plate and anchors, both formed from the same section of steel.

Furnished in stock lengths of 10 ft.

TRUSCON

EXECUTIVE OFFICES AND MAIN PLANT • YOUNGSTOWN 1, OHIO

SUBSIDIARY OF REPUBLIC STEEL CORPORATION

FACTORIES: CLEVELAND, OHIO • GADSDEN, ALA. • WALKERVILLE, ONT., CANADA
PRESSED STEEL DIVISION: 6100 TRUSCON AVENUE, CLEVELAND 4, OHIO
EXPORT TRADE DEPARTMENT: CHRYSLER BUILDING, 405 LEXINGTON AVENUE, NEW YORK 17, N. Y

TRUSCON ENGINEERING AND SALES OFFICES

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ATLANTA 3, GA., 610 Rhodes-Haverty Building

BALTIMORE 11, MD., 330 W. 24th Street
BIRMINGHAM 3, ALA., 1234 Martin Building
BOSTON 27 (South), MASS., 307 Dorchester Avenue
BUFFALO 3, N. Y., 1426 Rand Building

CHATTANOOGA 1, TENN., 19th and Grove Streets
CHICAGO 6, ILL., 201 No. Wells Street
CINCINNATI 2, OHIO, 330 Dixie Terminal Building
CLEVELAND 15, OHIO, 902 Hanna Building
COLUMBUS 15, OHIO, 1018 Atlas Building

DALLAS 1, TEXAS, 314 Construction Building
DAYTON 2, OHIO, 44 So. Ludlow Street
DENVER 2, COLO., 228 Patterson Building
DETROIT 26, MICH., 615 Wayne Street

GREENSBORO, N. C., 935 Jefferson Standard Building

HARRISBURG, PA., 410 No. Second Street
HOUSTON 11, TEXAS, P. O. Box 9085 Central Park Station

INDIANAPOLIS 3, IND., 398 Division Street

JACKSONVILLE 2, FLA., 301 Hildebrandt Building

KANSAS CITY 6, MO., 1001 Fluor Building

LITTLE ROCK, ARK., 812-13 Union Life Building
LOS ANGELES 54, CALIF., P. O. Box 3699 Terminal Annex Station
LOUISVILLE 2, KY., 477 Starks Building

MEMPHIS 5, TENN., 269 Walnut Street
MINNEAPOLIS 2, MINN., 246 Baker Building

NEW ORLEANS 12, LA., 1143 Canal Bank Building
NEW YORK 17, N. Y., 155 E. 44th Street
NORFOLK 10, VA., 518 Dickson Building

OKLAHOMA CITY 2, OKLA., 24 Northwest First Street
OMAHA 2, NEB., 806-07 Insurance Building

PHILADELPHIA 3, PA., 1616 Walnut Street
PHOENIX, ARIZ., 303 Luhrs Building
PITTSBURGH 22, PA., 2541 Oliver Building
PORTLAND 12, ORE., 2139 N. Kerby Avenue

ST. LOUIS 3, MO., 8th Floor Shell Building
SALT LAKE CITY 10, UTAH, 1526 So. West Temple St.
SAN FRANCISCO 5, CALIF., 604 Mission Street
SEATTLE 4, WASH., 757 Central Building
SYRACUSE 2, N. Y., Syracuse-Kemper Insurance Building

TOLEDO 4, OHIO, 220 Richardson Building

WASHINGTON 5, D. C., 700 Investment Building

YOUNGSTOWN 1, OHIO, 1315 Albert Street

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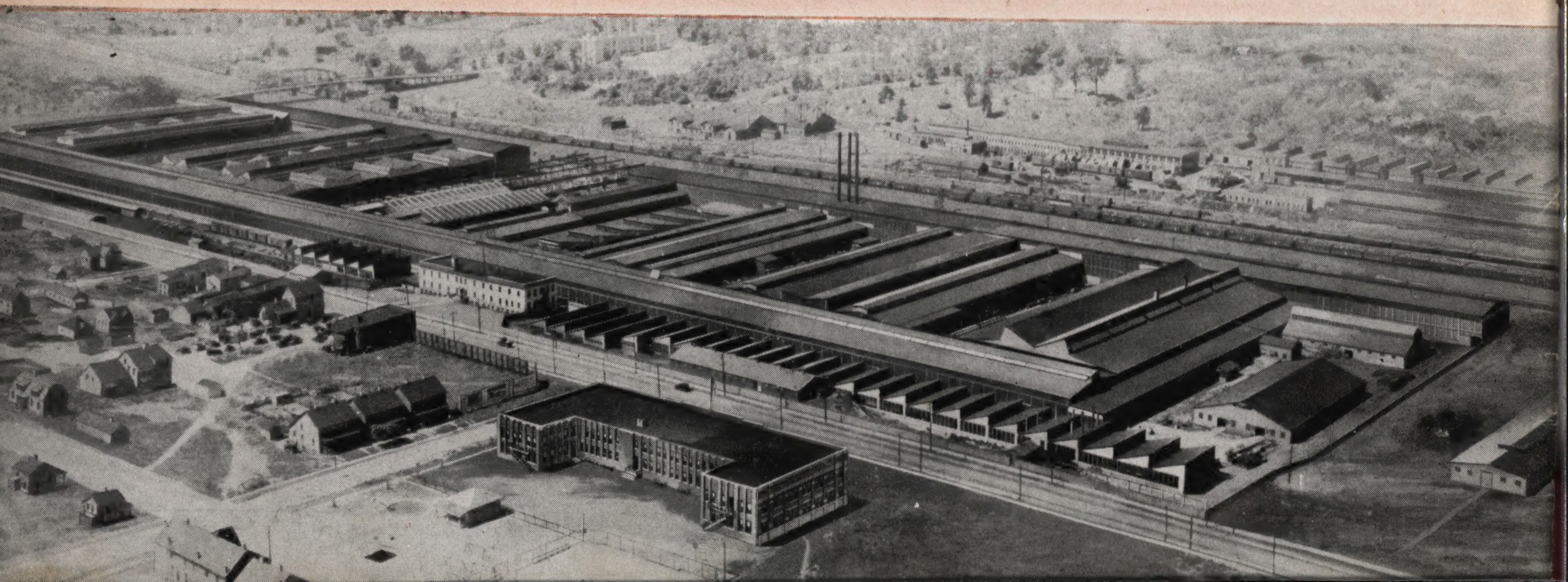

TRUSCON

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SUBSIDIARY OF REPUBLIC STEEL CORPORATION

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1, OHIO

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